

**ENHANCED MAGNETIC FIELD COMMUNICATION SYSTEM****Abstract of the Disclosure**

Devices and methods are provided to enhance magnetic field communication. One aspect of the present subject matter relates to a method for transmitting and receiving signals using an antenna element electrically connected to a driver and an amplifier. According to various embodiments of the method, a first signal is transmitted from the antenna element and a second signal that was induced in the antenna element is received. Transmitting the first signal includes driving the first signal through the antenna element using the driver, and monitoring the first signal through an input impedance of the amplifier. Receiving the second signal includes reducing the input impedance of the amplifier, and receiving the second signal at the amplifier through the reduced input impedance. Various embodiments shield the antenna element from electric and electromagnetic fields. Other aspects are provided herein.

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